IS 6514 (1972): Nasal Cartilage Knife (Ballenger's Pattern)
[MHD 4: Ear, Nose and Throat Surgery Instruments]

BLANK PAGE

AMENDMENT NO. 1 OCTOBER 1979

TO

IS:6514-1972 SPECIFICATION FOR NASAL CARTILAGE KNIFE (BALLENGER'S PATTERN)

Alteration

(*Page 2, clauses 6.2 and 6.2.1*) - Substitute the following for the existing clauses:

"6.2 *Corrosion Resistance* - The instrument shall satisfy the boiling and autoclaving test as specified in IS:7531-1975 'Method for boiling and autoclaving test for corrosion resistance of stainless steel surgical instruments'."

(CPDC 26)

Reprography Unit, ISI, New Delhi

UDC 615·472·3 : 616·211-018·3-72

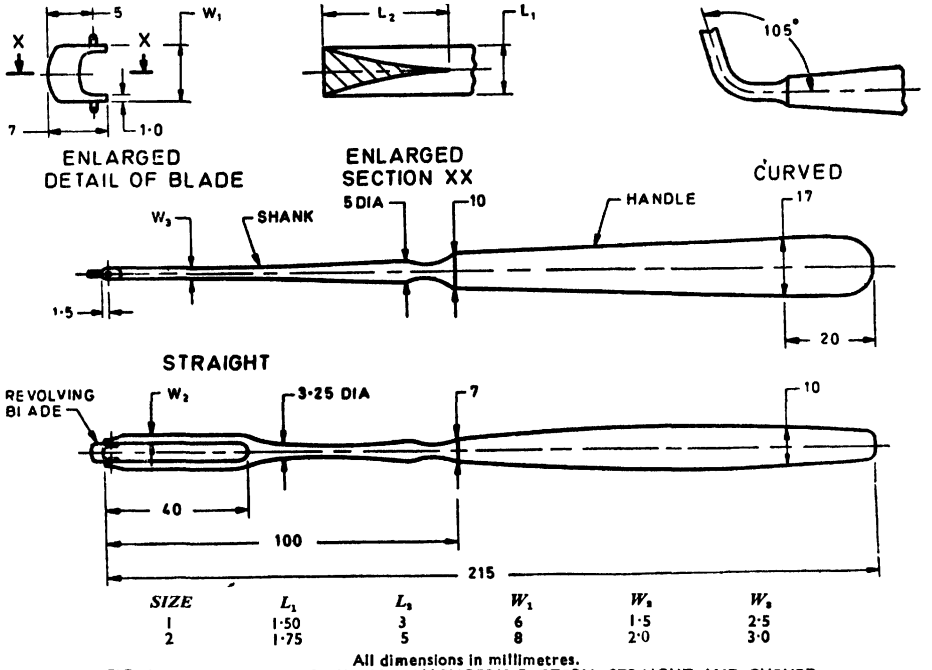
Surgical Instruments Sectional Committee, CPDC 11; Precision Type Surgical Instruments Subcommittee, CPDC 11:5 [Ref: Doc: CPDC 11 (623)]

Indian Standard

SPECIFICATION FOR NASAL CARTILAGE KNIFE (BALLENGER'S PATTERN)

1. Scope—Specifies the dimensional and other requirements of Ballenger's nasal cartilage knife straight and curved (two sizes) used in ENT surgery.

2. Shape and Dimensions—As shown in Fig. 1.



SIZE	L_1	L_2	W_1	W_2	W_3
1	1·50	3	6	1·5	2·5
2	1·75	5	8	2·0	3·0

All dimensions in millimetres.

FIG. 1 NASAL CARTILAGE KNIFE, BALLENGER'S PATTERN, STRAIGHT AND CURVED

3. Materials

3.1 *Knife Shank and Revolving Blade*—Stainless steel conforming to designation 30Cr13 of Schedule V of IS:1570-1961 'Schedules for wrought steels for general engineering purposes' or having the following composition:

	Percent
Carbon	0·35 to 0·45
Silicon	0·6 *Max*
Manganese	0·6 *Max*
Chromium	12 to 14
Nickel	0·6 *Max*
Sulphur	0·03 *Max*
Phosphorus	0·03 *Max*

3.2 *Handle*—Stainless steel conforming to Designation 30Cr13 or 04Cr19Ni9 or 07Cr19Ni9 of Schedule V of IS:1570-1961 or brass.

Adopted 24 February 1972

INDIAN STANDARDS INSTITUTION
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 1

4. Workmanship and Finish

4.1 The cutting edge on the revolving blade shall be hollow ground, well-cut, clean, sharp and free from nicks, feathers and pits. The instrument shall be balanced and shall have a good feel.

4.2 The revolving blade shall be capable of freely revolving in any direction about its pivots in the forked portion of the shank. It shall, however, be so pivoted that the spring action of the fork shall prevent the blade from revolving or changing its position due to its own weight.

4.3 All edges, except the cutting edge, shall be even, rounded and nowhere sharp. All surfaces shall be smooth and free from burrs, pits, cracks and other surface defects.

4.4 Handle shall be hollow and shall be fitted to the knife shank by screwing in and silver soldering. The silver soldering shall be sound and neat.

4.5 The knife shank, revolving blade and the handle, when made of stainless steel shall be passivated and polished bright. The handle, when made of brass, shall be plated chromium over nickel and the plating shall conform to Service Grade No. 2 of IS : 4827-1966 'Specification for electroplated coatings of nickel and chromium on copper and copper alloys'.

5. Heat Treatment — The revolving blade and forked shank shall be hardened and tempered to a hardness of 430 to 490 *HV*.

6. Tests

6.1 *Performance Test* — Take a piece of cow curried leather 1 mm thick and 100 mm long. Make five slits with knife each 50 mm long. The blade shall make neat slits and shall not show any sign of damage or blunting after the test.

6.2 *Corrosion Resistance Test* — The stainless steel components shall be tested for corrosion resistance as given in **6.2.1.**

6.2.1 *Copper sulphate test* — Scrub the sample with soap and warm water, rinse in hot water and then dip in 95 percent ethyl alcohol. Dry the sample. Immerse in copper sulphate solution at room temperature for 6 minutes and wash off with fresh water or wet cotton wool.

Make up the solution as follows:

Copper sulphate ($CuSO_4.5H_2O$)	4·0 g
Sulphuric acid (H_2SO_4) (sp gr 1·84)	10·0 g
Distilled water [*see* IS : 1070-1960 Specification for water, distilled quality (*revised*)]	90·0 ml

No red stains or spots on the sample shall be allowed but dulling of the polished surface may be permitted.

7. Marking — Mark with the following:

a) Manufacturer's name, initials or recognized trade-mark;

b) Words 'Stainless Steel' or letters 'SS' on the forked shank and the revolving blade; and

c) Size of the blade.

7.1 *ISI Certification Marking* — Details available from the Indian Standards Institution, New Delhi 1.

8. Packing — As agreed to between the purchaser and the supplier. The revolving blade shall be suitably protected.